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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,379	12/03/2003	Satoru Tobita	H64-163096M/MNN	3101

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EXAMINER
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HSIEH, SHIH WEN

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

<b>Office Action Summary</b>	<b>Application No.</b> 10/725,379	<b>Applicant(s)</b> TOBITA ET AL.	
	<b>Examiner</b> Shih-wen Hsieh	<b>Art Unit</b> 2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 22-37 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23-25 and 29-37 is/are allowed.
- 6) ☒ Claim(s) 22 and 26-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10-17-05</u> . | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment***

***Specification***

1. The disclosure is objected to because of the following informalities:  
Page 9, line 16, please change "81" into "18".

***Claim Objections***

2. Claims 22-24 and 33 are objected to because of the following informalities:  
In regard to:  
Claim 22 and 23:  
Line 11, please change "the central lines" into "central lines" to correct a minor lack of antecedent basis problem.  
Line 13, please change "chamber" into "chambers".  
Claim 23:  
Line 13, please change "the rigidity of a partition wall" into "a rigidity of a partition wall" or "rigidity of a partition wall" to correct a minor lack of antecedent basis problem.  
Line 13-14, please change "the communication flow passage" into "a communication flow passage" to correct a minor lack of antecedent basis problem.  
Claim 24:

Page 5, line 4, please change "the central lines" into "central lines" to correct a minor lack of antecedent basis problem.

Page 5, lines 8-9, please change all "the (four places)" into "a" to correct a minor lack of antecedent basis problem.

Pages 5 and 8, line 11, please define "A" in the formula.

Claim 33:

Line 2, please change "the distance" into "a distance" to correct a minor lack of antecedent basis problem.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 22 and 26-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Toyoji et al. (JP 08-011304, from IDS dated Oct. 17, 2005).

In regard to:

Claim 22:

Toyoji et al. teach:

A recording head, comprising:

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a nozzle plate (107, fig. 2) having nozzles (101, figs. 1 and 2) for discharging ink droplets (116, fig. 2) arranged in a row;

a plurality of pressure generating chambers (103, figs. 1 and 2) communicating to the nozzles, the plurality of pressure generating chambers including a first pressure generating chamber (103a, figs. 1 and 2) and a second pressure generating chamber (103b, figs. 1 and 2);

a diaphragm (108, fig. 2) formed on one face of the pressure generating chamber;

a piezoelectric element (109, fig. 2) for displacing the diaphragm, wherein the first pressure generating chamber is disposed on one side of the nozzles arranged in the row, and a second pressure generating chamber is disposed on the other side, and the first and second pressure generating chambers are opposed to each other across the nozzles arranged in the row so that the central lines of the first and second pressure generating chambers are almost coincident (refer to fig. 1, in which the arrangement of the pressure generating chambers is one-on-one opposing to each other, and central lines, although not explicitly draw, are almost coincide); and

a communication flow passage (102 a and 102b, fig. 1) leading from the pressure generating chamber to the nozzles),

wherein the communication flow passage is narrower than the width of the pressure chamber, and wherein a part of the communication flow passage is located outside a side wall face of the pressure generating chamber (from figs 1 and 2, it can be

seen the flow passage is narrower than the width of the chamber, and a part of the passage is outside of the chamber wall).

Claim 26:

Toyiji et al. further teach:

wherein the piezoelectric element has a piezoelectric material and an electrically conductive material (117, figs. 2-4) laminated alternately, refer to the English constitution, and

wherein one end of the piezoelectric element is fixed to at least one base board (118, figs. 2-4) having electrical conductivity (generally piezoelectric material, PZT has metal ingredients, such as Pb, Zr, Ti, therefore, it is electrical conductive).

Claim 27:

wherein the piezoelectric element is fixed to the base board and then divided like a comb, refer to figs. 2 and 4, comb shape is shown in fig. 4).

Claim 28:

The inkjet recording head according to claim 22, wherein the pressure generating chamber is formed of silicon by etching.

Rejection:

Etching is generally used to manufacture a print head, and silicon substrate is generally used for such a manufacturing process.

***Allowable Subject Matter***

5. Claims 23-25 and 29-37 are allowed.

***Response to Arguments***

6. Applicant's arguments filed on Oct. 12, 2005 have been fully considered but they are not persuasive.

Applicants argued in their Remarks pages 9-10 that reference cited in IDS Oct. 17, 2005 (JP 08-011304) does not teach the instant invention because of the cite reference has a problem in joining a chamber plate and the nozzle plate with adhesive agent (for detail, see pages 9-10). Examiner does not agree. Please be advised that features, such as the advantages that Applicants describe in their Remarks, which are in the specification but are not reflected into the claims do not carry patentable weight. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. Therefore, reference JP 08-011304 is still read on claims 22 and 26-28. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

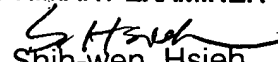
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-wen Hsieh whose telephone number is 571-272-2256. The examiner can normally be reached on 7:30AM -5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, S D. Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**SHIH-WEN HSIEH**  
**PRIMARY EXAMINER**

  
Shih-wen Hsieh  
Primary Examiner  
Art Unit 2861

SWH

  
Dec. 20, 2005